CALL FOR PAPERS

A Special Issue on Recent Trends in Reuse and Integration
Information Systems Frontiers

Information reuse and integration addresses the efficient creation and expansion of knowledge through random and symmetric methodologies. Some knowledge is axiomatic. It is discoverable, but not derivable, and its discovery is far from trivial. We call such knowledge, *random.* Other knowledge can be derived through the effective transformation of knowledge, and its derivation involves significantly less effort. We call such knowledge, *symmetric.* Reuse and integration are intrinsically linked; whereby, knowledge integration leads to reusable symmetric variants extraction; and, knowledge reuse involves tractable pathways towards its integration.

The need for heuristics pervades the real-world computing. These are not merely meant to enable scalability, but serve the need to search out symmetric knowledge. However, there is no guarantee that needed heuristics can be discovered – only that they exist, in principle. It follows that the field of heuristic discovery is of enormous pragmatic import. Another novel trend is the movement away from statistical data mining in the large towards causal data mining in the small. Many problems do not admit to purist solutions; but, rather borrow from both camps. Knowledge – including heuristic knowledge – is required. A third trend is towards the integration of Systems of Systems (SoS) in addressing the solution of ever-more complex problems. Hence, these subsystems are subject to ever-greater degrees of reuse, which is where we are evidently headed.

As a result, all 5th generation programming systems, all non-trivial knowledge acquisition systems, and any mechanics for formal representation must embody one or more of these metric components if it is to be reusable and integrated in a non-trivial way. Clearly, the advancement of societal systems, in the large, will be an integrated effort.

This ISF special issue on the Recent Trends in Reuse and Integration calls for scientific contributions as well as industrial experiences in applying intelligent mechanisms and/or their formal underpinnings to one or more of the following areas:

- Reuse in approximating the solution to *NP-hard* problems
- Reuse in causal and statistical data mining
- Reuse and integration in knowledge and heuristic discovery
- Reuse and integration in domain transference
- Dimensionality scaling in heuristic discovery

- Reuse and integration in scalable Systems of Systems (SoS)
- Reuse and integration in software engineering for cybersecurity
- Reuse and integration in intelligent systems and evolutionary computing
- Reuse and integration in hardware cost reduction via FPGAs

Important Dates

Submission deadline: 01 January 2018
Author notification: 01 March 2018
Revised paper due: 01 April 2018
Final notification: 01 June 2018
Final paper due: 01 July 2018

About Information Systems Frontiers

Information Systems Frontiers (ISF) is a high-ranking, international scholarly journal designed to bridge the contributing academic disciplines and provide a link between academia and industry. The central objective of ISF is to publish original, well-written, self-contained contributions that elucidate novel research and innovation in IS/IT, which provide for fundamental advancements in the field.

ISF is Abstracted/Indexed in Science Citation Index Expanded (SciSearch), Journal Citation Reports/Science Edition, SCOPUS, INSPEC, Google Scholar, EBSCO Discovery Service, CSA, ProQuest, ABS Academic Journal Quality Guide, Academic OneFile, ACM Digital Library, Computer Science Index, CSA Environmental Sciences, Current Contents/Engineering, Computing and Technology, DBLP, EI-Compendex, Gale, io-port.net, OCLC, Referativnyi Zhurnal (VINITI), SCImago, Summon by ProQuest.

Submission Instructions

Manuscripts must be submitted to the ISF-Springer online submission system at: http://www.editorialmanager.com/isfi/
Paper submissions must conform to the format guidelines of Information Systems Frontiers available at:
http://www.springer.com/business/business+information+systems/journal/10796

Authors should select SI: Recent Trends in Reuse and Integration, from the "Choose Article Type" pull-down menu for submission. Submitted papers must be original and must not have been previously published or be under consideration for publication elsewhere. In case a paper has already been published at a conference, it should include at least 30 percent new material for publication in this special issue. Authors must provide previously published material relevant to their submissions; and, detail all significant augmentations.

Special Issue Editors

Thouraya Bouabana Tebibel, Ecole nationale Supérieure d'Informatique, Algeria
t_tebibel@esi.dz

Stuart H. Rubin, Space and Naval Warfare Systems Center Pacific, San Diego, CA USA
stuart.rubin@navy.mil

BIOGRAPHIES

Prof. Thouraya Bouabana Tebibel received a Ph.D. in Computer Science from USTHB University (Algeria) in collaboration with Pierre & Marie Curie University (France) in 2007. She has been an engineer/researcher for eight years and is now a full professor of computer science at Ecole nationale Supérieure d'Informatique in Algeria. She was the Director of the Doctoral School in Sciences and Technologies of Information and Communication for four years and is now a director of research at Laboratoire de Communication des Systèmes Informatiques. She has over 90 refereed publications and a book edited by Editions Universitaires Européennes. She was co-editor (with S. H. Rubin) of three Springer books in the Advances in Intelligent Systems and Computing series.

Dr. Stuart H. Rubin is a senior scientist at the Space and Naval Warfare Systems Center (SSC) in San Diego, code 71730 (Advanced Concepts & Applied Research). He was previously a tenured associate professor of computer science at Central Michigan University (CMU). He received a Ph.D. in Computer and Information Science from Lehigh University in 1988. He was previously an ONT Post-Doctoral Fellow, at NOSC, for three years. He has over 35 assigned Navy patents, over 295 Refereed Publications, and received SSC-PAC's Publication of the Year Awards in 2007, 2009, 2010, and 2011. He was co-editor (with T. Bouabana Tebibel) of three Springer books in the Advances in Intelligent Systems and Computing series. Dr. Rubin is a SIRI Fellow and serves in leadership roles in numerous IEEE technical societies.